Mansfield Conservation Commission
Storrs, CT 06268
January 20, 2010

Commissioner Amey Marrella
State of Connecticut
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

Dear Commissioner Marrella:

The Mansfield Conservation Commission would like to make the following two comments regarding the "MEMORANDUM OF AGREEMENT BETWEEN THE [THE] DEPARMENT OF ENVIRONMENTAL PROTECTION AND THE UNIVERSITY OF CONNECTICUT" (UConn) signed by University of Connecticut Vice President Barry Feldman (9/4/09) and Betsey Wingfield, DEP Bureau Chief for Water Protection and Land Reuse (9/24/09). We applaud four out of the five future projects listed for the improvement of the water quality in Eagleville Brook and Roberts Brook.

Unfortunately we are unable to applaud the wisdom of allowing diversions from the Willimantic River Watershed (not a public water supply watershed, one of whose tributaries is Eagleville Brook), into the Fenton River watershed (a public water supply watershed, one of whose tributaries is Roberts Brook). The Mansfield Conservation Commission questions not only the wisdom, but also the logic and scientific basis for these diversions. We understand the pressures from the EPA regarding TMDLs in Eagleville Brook, but this diversion has the potential to do as much or more harm to Roberts Brook, than potential to help Eagleville Brook. It also sets a dangerous precedent by sending polluted water regulated by a TMDL into the most protected of streams under DEP water quality standards, essentially voiding those standards and apparently in violation of the Clean Water Act itself. The Eagleville Brook problem is likely to be temporary in nature and the brook should begin the healing process once the University puts the appropriate stormwater devices in place and the University's UConn 2000 construction programs wind down.

We note that the Mansfield Conservation Commission is constituted in accordance with enabling legislation by the State of Connecticut (Sections 7-131a through 7-131e of the General Statutes) for the purpose of "The development, conservation, supervision and regulation of natural resources, including water resources, within municipal limits." We further note that the University of Connecticut's main campus falls within Mansfield's municipal limits and that 7-131c authorizes the exchange of information between local conservation commissions and the Commissioner of the DEP.

Comment one:

The Mansfield Conservation Commission (MCC) finds the legal basis for this MOA to be unclear. The MOA represents a local decision which affects the towns of Mansfield, Windham, and Coventry without consultation. It grants, inappropriately we believe, retroactive approval and possible legality to ten projects with no public hearings, no prior Flood Management Certifications, and in apparent disregard for Connecticut's Anti-Degradation Implementation Policy (established in accordance with the Federal Clean Water Act – Title 40 Part 131.12), and probably with no DPH approval letters for stormwater discharges within 100 feet of a watercourse within a public water supply watershed.

As noted, this decision was made without input from the many stakeholders who have invested years of effort in wisely using and protecting the watersheds in question. It is not sufficient to tell these stakeholders that they will have the opportunity to comment on the five proposed individual projects at some later date (and have no opportunity to comment on those projects that have been completed without individual Flood Management

Certificates). The MCC requests that you bring this matter to the attention of the Connecticut Attorney General, and consider reissuing an improved MOA after a period of public comment.

Comment two:

The MCC has particular concerns regarding the plans to divert stormwater runoff from 55 acres (an incorrect number in the MOA). We note that the watershed containing Swan Lake has already been diverted (without a permitting process, although with a minor alteration, the historic outflow from this lake could be reestablished). The newly proposed diversion proposes to change a portion of the natural flow of the Eagleville Brook and Willimantic River watershed (not a public water supply watershed) into the Fenton River Watershed (a public water supply watershed). This would discharge water regulated by a TMDL (see the DEP document, "A total Maximum Daily Load Analysis for Eagleville Brook, Mansfield CT," 2/8/07, or referred to as EBTMDL later in this letter) which is therefore among the most polluted in the state to a Class AA river which requires the highest standard of protection. The transfer of stormwater is effectively creating a new point discharge to the Roberts Brook/Fenton River, which appears to fail the test for issuance of a certificate or permit under the Connecticut Anti-Degradation Implementation Policy, established as required by the Federal Clean Water Act and Connecticut's Surface Water Quality Standards. The test for issuance to a Class AA water requires the following: a) the discharge is of limited duration; and b) the discharge will consist of clean water. However, the proposed diversion will a) be permanent; and b) contain water polluted enough to require a TMDL.

By nearly all measures, both Roberts Brook and Eagleville Brook are similarly compromised by the IC of the campus. However, the proposal to divert a "complex array of pollutants" to lessen this impact on Eagleville Brook at the expense of Roberts Brook has been made without a similar investigation of potential negative impacts to Roberts Brook. Based on IC percentages of greater than 30% for the origins of both brooks on the campus, this is a significant oversight, especially when it is Roberts Brook that is in a public water supply watershed, not Eagleville Brook.

If this MOA is not rewritten after securing additional local input, at the very minimum, we expect to be given timely notification of hearings. The Commission requests these hearings be held in Storrs to facilitate local input. The following pages contain questions and comments from the MCC that we request written responses to. UConn's Rich Miller and Jason Coite attended our November meeting, but apparently no one was available from your Bureau of Water Protection and Land Reuse that evening to help us to better understand a number of the DEP-related issues.

Please note, this is a letter from the Mansfield Conservation Commission, not our Town Council. Only our Town Council can officially communicate Town policy positions.

Sincerely yours,

Quentin Kessel, Chair
Mansfield Conservation Commission
(Please address written communications to me at 97 Codfish Falls Road, Storrs, CT 06269 and emails to me at quentinkessel@earthlink.net.)

CC: Betsey Wingfield, DEP
Barry Feldman, Rich Miller, UConn
CT Dept. of Public Health
Mansfield Inland Wetland Agency
Mansfield Town Council
Willimantic Water Works
WINCOG
Council for Environmental Quality
Connecticut Fund for the Environment
Connecticut Rivers Alliance
Willimantic River Alliance
Naubesatuck Watershed Council
Representative Denise Merrill
Senator Donald Williams

Additional Mansfield Conservation Commission questions and comments:

1. Given that the State Statutes state that Conservation Commissions have responsibility for "The development, conservation, supervision and regulation of natural resources, including water resources, within municipal limits," how is it that the DEP does not notify local Commissions when issues such as those addressed in this letter arise?

2. Why was the Willimantic Water Works not included in the discussions that led to this MOA. In working to protect the integrity of its reservoir, the Willimantic Water Works explicitly defines the Fenton River watershed as a critical area because it is riddled with wetlands and tributary streams. Because of this, extensive investigations, including VOCs, pesticides, metals and nutrients, were made of the Fenton and some of its tributaries in order to understand the quality of the water entering their reservoir. Why is no reference made to these reports? ("Mansfield Hollow Lake and Willimantic Reservoir Watershed Study," University of Connecticut, Department of Civil and Environmental Engineering, March, 2003, "Monitoring and Analysis of the Willimantic Reservoir and the Mansfield Hollow Lake Watershed, University of Connecticut, Environmental Research Institute, April 14, 2005). How are the diversions (one to be approved retroactively and the other proposed) likely to change the earlier results?

3. Why do, or do not, these diversions into an AA river violate Connecticut's Anti-Degradation Implementation Policy? This MOA seems to run contrary to present-day water conservation practices. Not only the DEP's BMPs, but we note the Nature Conservancy in its Connecticut Strategic Plan (FY 2010-2012) speaks of cooperation with the DEP in its section on improving freshwater quality on priority rivers, and also speaks in terms of the re-establishing of natural flow conditions and increasing hydrologic connections at the watershed scale.

It appears to the MCC that any improvement made to the water quality in the Eagleville Brook by this diversion will be to the detriment of the water quality in Roberts Brook and the Fenton River. The Fenton River is already burdened with significant impervious coverage runoff from the campus (including from watersheds IIA, IIB, and IIC in the notation used in the Campus Wide Drainage Master Plan, flood Management Certification Application (CWDMP)). This includes building and parking lot runoff from most of South Campus and the campus portion of Route 195. It also includes the unapproved diversion of the Swan Lake watershed (IIB) which includes Swan Lake, into which the additional 55 acres (IIIA) is proposed to be drained. (Much of the impervious coverage [IC] in this IIIA watershed is parking lot runoff).

4. According to the DEP's 2004 Stormwater Quality Manual, before proceeding with a diversion of stormwater discharges within 100 feet of a watercourse within a public water supply watershed, a DPH approval letter must be obtained. Does the University have such approval for these diversions? (The Swan Lake diversion done with the construction of the Chemistry Building and the proposed "55 acre" diversion)

5a. With regard to action levels on TMDLs: Partial justification for the diversions is the impervious coverage (IC) analysis in the EBTMDL report showing that the "headwaters" of Eagleville Brook are likely polluted. This has been confirmed with macroinvertebrate studies. As Eagleville and Roberts Brook have similar IC numbers, how, without a corresponding investigation of Roberts Brook how can this diversion be justified?

5b. With regard to the EBTMDL report: Appendix 2 of this document justifies IC as a Surrogate Target for TMDL Analyses in Connecticut and demonstrates, that within this simplistic model, if the percentage of IC coverage above a given point in a waterway in the watershed exceeds 12%, the macroinvertebrate community in the watershed is threatened, and Connecticut's water quality criteria for support of aquatic life may not be met. For this reason the TMDL document sets 11% IC as the goal to be reached in the Eagleville Brook watershed.

The proposed diversion does not significantly change the IC percentage numbers for the Eagleville Brook watershed. Apparently, the establishment of better stormwater management, not the diversion, is the primary means being depended upon to lower the effective IC percentage from the 27% IC coverage of the watershed containing the headwaters of Eagleville Brook. Neither the EBTMDL nor the CWDMP report make provision for significantly decreasing the actual percentage of IC with pervious parking lots, rain gardens, etc. Not pointed out in either report is the fact that the two other watersheds of the upper reaches of the Eagleville Brook have higher and more influential IC percentages (IIIB is 223 acres at 51% and the already diverted IIB with its 16 acres at 62%). Taken together these three watersheds had an impervious coverage of 47%; without including IIB, the number only falls to 46%. Clearly the 223 acres of IIB with its 51% IC is the watershed contributing the most to the TMDL in Eagleville Brook. Detrimental to aquatic life in Eagleville Brook are the very high copper levels and these have been attributed to the copper roof of Castleman Building. Both this building and the newer copper-sheathed Pharmacy Building are in watershed IIIB. For this reason, the diversion of watershed IIIA away from Eagleville Brook is unlikely to help with the copper overload. As noted in the body of the letter: **this diversion has the potential to do as much or more harm to Roberts Brook, than potential to help Eagleville Brook.**

While the MCC can applaud the 11% goal, this number must be placed in proper perspective. Typical IC values in the northeast US vary from 0-10% in open areas, to 20-40% in low density residential areas, to 45-60% in high density residential areas (from Table 2-2 in the 2004 Connecticut Stormwater Quality Manual). As Eagleville Brook (or Roberts Brook) travels further and further away from the UConn campus, the cumulative percentage of IC naturally lessens as more and more open areas are integrated into the IC equation. For Eagleville Brook the IC numbers in the EBTMDL report range from 27% to 51% on campus, to 14% where the brook passes under Hunting Lodge Road, to 5% well away from the campus. In other words, the 27% IC in IIIA is in the expected range for a high-density residential area. Much of this watershed is populated by parking lots, dormitories and other student housing. The proposed use of Swan Lake as a stormwater management device is inappropriate and will only lead to the problems that have long plagued UConn's Mirror Lake.

6. The MCC applauds the other stormwater management devices proposed in the MOA, but committing the University to the "55 acre" Willimantic River Watershed diversion into the Fenton Riverwatershed is premature. With the passage of time, the temporary stresses due to the uncontrolled UConn construction program will gradually equilibrate to a new normal. This new normal may be expected to approach the preconstruction conditions. In fact, the new stormwater management devices may even result in an improvement over the preconstruction conditions without proceeding with the proposed diversion.

Is there some evidence that the more recent Eagleville and Roberts Brook problems don't have their origin in the lack of appropriate supervision of the construction boom at UConn, especially with regard to stormwater management and sedimentation and erosion controls? The MOA attempts to overcome this lack of oversight with five projects, the first three of which are long overdue and should have been put in

place prior to the initiation of UConn 2000 construction. The first of these is intended to minimize sedimentation and erosion in Roberts Brook. The MCC notes the lack of a similar stormwater control device for Eagleville Brook which might be appropriately placed just prior to point where the stream is covered and piped under the UConn campus. Isn't it possible that with these stormwater control devices in place, the pollution levels of both brooks will improve significantly without the proposed diversion?

7. With regard to the HEC RAS hydrology calculations used to calculate stormwater flows in Eagleville and Roberts Brooks, we are reminded of the old computer saying "garbage in, garbage out." Without accurate measurements of flow conditions in a given brook, this computer program is unable to give useful answers. In this imperfect world, the HEC RAS follows its output with error messages and a certain number of error messages is acceptable. However, the 32 pages of error messages in HEC RAS output for Roberts Brook deserves a closer look; it implies poor input data to the program and makes the results questionable.

8. With regard to UConn's first stormwater project: UConn is requesting a DEP General Permit for Utilities and Drainage, dated July, 2009. We observe their response to 6a "Is the subject activity within a watercourse or floodplain?", is "no." This is clearly an incorrect answer (see CGS 22a-38-16, copied below) which they justify with the questionable statement, "These discharges only flow generally when there is a storm event, after which there is no significant flow in the channel. Therefore, we believe the area immediately downstream of the discharge location should not technically be a watercourse." We question both their observations, it is indeed a watercourse, and their conclusions here. As noted in the body of the letter, the proposed transfer of stormwater will effectively create a new point discharge to the Roberts Brook/Fenton River, which appears to fail the test for issuance of a certificate because: a) the discharge is permanent and not of limited duration, and b), the discharge consists of water polluted enough to be worthy of a TMDL.

The University's claim that the area immediately downstream of the discharge location should not technically be a watercourse, seems to be an attempt to circumvent DPH regulations regulating stormwater discharges within 100 feet of a watercourse within a public water supply watershed. This should not be permitted.

Copied from the Connecticut General Statutes 22a-38"

(16) "Watercourses" means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon this state or any portion thereof, not regulated pursuant to sections 22a-28 to 22a-35, inclusive. Intermittent watercourses shall be delineated by a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) Evidence of scour or deposits of recent alluvium or detritus, (B) the presence of standing or flowing water for a duration longer than a particular storm incident, and (C) the presence of hydrophytic vegetation;